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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/712,144	11/15/2000	Christian Braun	ALL.010	8571

7590 06/18/2002
Jones Volentine LLC
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12200 Sunrise Valley Drive
Reston, VA 20191

EXAMINER

WIMER, MICHAEL C

ART UNIT	PAPER NUMBER
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2821

DATE MAILED: 06/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/712,144

Applicant(s)

BRAUN ET AL.

Examiner

Michael C. Wimer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29,31-33 and 35-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29,31-33 and 35-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-29, 31-33 and 35-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuffner et al (5486836).

Regarding Claims 1-29, 31-33 and 35-38, Kuffner et al show a spatial diversity antenna device/system and method of transmitting and/or receiving RF radiation in said device/system comprising a plurality of antennas 302, 204 in Figs. 1-4 (or those in Figs. 5 and 6), which are switchable between antenna configurations via switch 306, etc., being distinguished by a set of radiation parameters, and particularly with respect to the radio's position, orientation and the signal strength of the energy received thereby, and all arranged as claimed. The communications device in Fig. 9 is shown in the transmit position where the device contains patches 904 and 906. The pocket position is effected by folding the patch 906 into the keypad position/area. The built-in sensor is connected to the switches 908, 910 to provide a system with increased receiver gain and transmit gain. The patches provide different feed connections as claimed. The switches are deemed to be those as claimed, e.g., in Claim 20.

The method is set forth and carried out in Kuffner et al by adapting each of the plurality of antenna configuration states which are distinguished by a set of radiation parameters, and selectively switching the switchable antenna structure between the plurality of antenna configurations (clearly set forth in Figures 3-6 and in the flow charts of Figures 7 and 8). Spatial diversity is achieved by varying the polarization between patches. Column 5, lines 39-42 clearly state that the selection made by the switches is based on one or more predetermined signal qualities. By use of an algorithm, signal strength is monitored to select the polarization in the patch that has the highest signal strength. The operation environment affects the signal strength. The circuit has a control device for receiving the detected physical property of an operation environment. Thus, the operation and system of Kuffner et al anticipates the claims.

Response to Arguments

3. Applicant's arguments filed 2/7/02 have been fully considered but they are not persuasive. Specifically, the Kuffner et al system does anticipate the functions recited in the present claims. Spatial diversity is used in environments where signal strength varies continuously. In this situation, the Kuffner et al antenna is used in a portable phone where signal strength is "continuously" changing. The need for a continuous or usable signal to maintain connection/contact is affected by spatial diversity used by Kuffner et al. The system provides switching between a plurality of antenna configuration states. Those states are varying the polarization of the patches used. The radiation parameters are predetermined by the algorithm used to monitor signal strength. Signal strength varies because of the phone's environment changing

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continuously. Movement of the phone relative to the body and external structures, e.g., buildings static structures, etc. all effect the signal strength between the phone and cell site. The patch antenna's polarizations are the configuration states and each "is adapted for use of the antenna device in the communication device in a respective predefined physical operation environment." Such feature, modes of operation and interrelationship of structure are disclosed by Kuffner et al. The system of Kuffner et al is fully operable because of its ability to select polarizations between two antenna elements (two patches, defining spatial diversity) within the operation environment of the phone. Kuffner et al do show clearly a plurality of antenna configuration states for respective predefined physical operation environments. That is, the phone is moved continuously in its environment, spatial diversity is affected due to the signal strength, and the polarization is switched in the antennas to increase and compensate the signal strength. Thus, it is shown that the functional modes of operation alleged herein are applicable in Kuffner et al. It is not seen that the claims at hand patentably define over the prior art system of Kuffner et al.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not


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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Wimer whose telephone number is (703) 305-3555. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don K. Wong can be reached on (703) 308-4856. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


Michael C. Wimer
Primary Examiner
Art Unit 2821

MCW
June 5, 2002